

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Appln. No: To Be Assigned  
Applicant: Dharshini C. Fongalland et al.  
Filed: Herewith  
Title: SUBSTRATE  
TC/A.U.:  
Examiner:  
Confirmation No.:  
Docket No.: JMYT-234US1

**Continuation of:**

Appln. No: 09/807,353  
Applicant: Dharshini C. Fongalland et al.  
Filed: April 12, 2001  
Title: SUBSTRATE  
TC/A.U.: 1723  
Examiner: Krishnan S. Menon  
Confirmation No.: 6310  
Docket No.: JMYT-234US

**INFORMATION DISCLOSURE STATEMENT**

Mail Stop Patent Application  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Pursuant to 37 C.F.R. §§ 1.97 and 1.98 and to the duty of disclosure set forth in 37 C.F.R. § 1.56, the Examiner in charge of the above-identified application is requested to consider and make of record the references listed on the PTO 1449 (RP) submitted herewith.

Although the information submitted herewith may be "material" to the Examiner's consideration of the subject application, this submission is not intended to constitute an admission that such information is "prior art" as to the claimed invention.

In accordance with 37 C.F.R. § 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made.

Under 37 C.F.R. § 1.98(d), copies of the patents and publications listed on the enclosed PTO Form 1449 are not required to be provided, because they were cited by or submitted to the Patent and Trademark Office in prior application Serial No. 09/807,353, filed April 12, 2001, which is relied upon for an earlier filing date under 35 U.S.C. § 120.

This Information Disclosure Statement is being filed concurrently with the above-referenced continuation application.

Respectfully submitted,



Christopher R. Lewis, Reg. No. 36,201  
Attorney for Applicants

CRL/lrb  
Enclosure: Form PTO/SB/08 (3 pgs.)

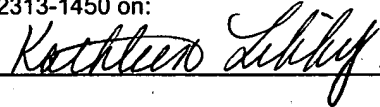
Dated: October 20, 2003

P.O. Box 980  
Valley Forge, PA 19482  
(610) 407-0700

The Commissioner for Patents is hereby authorized to charge payment to Deposit Account No. 18-0350 of any fees associated with this communication.

**EXPRESS MAIL** Mailing Label No.: EV 325926938 US  
Date of Deposit: October 20, 2003

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, with sufficient postage, in an envelope addressed to: Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on:



Kathleen Libby

Substitute for Form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

**C mplete if Known**

Application Number	To Be Assigned
Filing Date	Herewith
First Named Inventor	Dharshini C. Fongalland
Art Unit	
Examiner Name	
Attorney Docket No.	JMYT-234US1

SHEET 1 of 3

**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date (MM-DD-YYYY)	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code <sup>2</sup> (if known)			
		US-3,282,875	11-01-1966	Connolly et al.	
		US-4,329,435	05-11-1982	Kimoto et al.	
		US-4,330,654	05-18-1982	Ezzell et al.	
		US-4,358,545	11-09-1982	Ezzell et al.	
		US-4,417,969	11-29-1983	Ezzell et al.	
		US-4,433,082	02-21-1984	Grot	
		US-4,610,762	09-09-1986	Birdwell	
		US-4,842,620	06-27-1989	Hammel et al.	
		US-4,940,525	07-10-1990	Ezzell et al.	
		US-5,094,995	03-10-1992	Butt et al.	
		US-5,438,082	08-01-1995	Helmer-Metzmann et al.	
		US-5,468,574	11-21-1995	Ehrenberg et al.	
		US-5,523,181	06-04-1996	Stonehart et al.	
		US-5,547,551	08-20-1996	Bahar et al.	
		US-5,595,676	01-21-1997	Barnes et al.	
		US-5,599,639	02-04-1997	Sansone et al.	
		US-6,042,958	03-28-2000	Denton et al.	

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date (MM-DD-YYYY)	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known)				
		EP-0 331 321	09-06-1989	ICI PLC		<input type="checkbox"/>
		EP-0 345 964	12-13-1989	ICI PLC		<input type="checkbox"/>
		EP-0 574 791	12-22-1993	Hoechst AG		<input type="checkbox"/>
		EP-0 731 520	09-11-1996	Johnson Matthey PLC		<input type="checkbox"/>
		EP-0 791 974	08-27-1997	Johnson Matthey PLC		<input type="checkbox"/>
		EP-0 875 524	11-04-1998	DSM NV		<input type="checkbox"/>

Examiner  
SignatureDate  
Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

<sup>1</sup>Applicant's unique citation designation number (optional).

<sup>2</sup>See Kind Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04.

<sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard St.3).

<sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

<sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible.

<sup>6</sup>Applicant is to place a check mark here if English language translation is attached.

The collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for Form 1449A/PTO

# **INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

**C mplete if Kn wn**

Application Number	To Be Assigned
Filing Date	Herewith
First Named Inventor	Dharshini C. Fongalland
Art Unit	
Examiner Name	
Attorney Docket No.	JMYT-234US1

**SHEET 2 of 3**

## **U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date (MM-DD-YYYY)	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code <sup>2</sup> (if known)			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			

## **FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date (MM-DD-YYYY)	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known)				
		DD-283 478	10-17-1990	Leipzig Chemieanlagen		<input type="checkbox"/>
		GB-1 599 077	09-30-1981	Yuasa Battery Co. Ltd.		<input type="checkbox"/>
		JP-57 159502 (Abstract Only)	10-01-1982	Toyo Boseki KK		<input type="checkbox"/>
		JP-06 304548 (Abstract Only)	11-01-1994	Matsushita Electric Ind. Co. Ltd.		<input type="checkbox"/>
		NL-8003824	02-01-1982	Akzo NV		<input type="checkbox"/>
		WO-94/16002	07-21-1994	Allied Signal, Inc.		<input type="checkbox"/>
		WO-95/08581	03-30-1995	Ballard Power Systems		<input type="checkbox"/>
		WO-97/25369	07-17-1997	Ballard Power Systems, C. Stone, A. E. Steck		<input type="checkbox"/>

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

<sup>1</sup>Applicant's unique citation designation number (optional).

<sup>2</sup>See Kind Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04.

<sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard St.3).

<sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

<sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible.

<sup>6</sup>Applicant is to place a check mark here if English language translation is attached.

The collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO : Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Substitute for Form 1449B/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

**Complete if Known**

Application Number	To Be Assigned
Filing Date	Herewith
First Named Inventor	Dharshini C. Fongalland
Art Unit	
Examiner Name	
Attorney Docket No.	JMYT-234US1

SHEET 3 of 3

**NON-PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T <sup>2</sup>
		Kolde et al., "Advanced Composite Polymer Electrolyte Fuel Cell Membranes," Electrochemical Society Proceedings, Vol. 95-23 (1995) pp. 193-201.	<input type="checkbox"/>
		International Search Report dated January 12, 2000, from International Application No. PCT/GB99/02935	<input type="checkbox"/>
		British Search Report dated February 19, 1999, from British Application No. 9822569.1.	<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>

Examiner  
SignatureDate  
Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

<sup>1</sup>Applicant's unique citation designation number (optional).

<sup>2</sup>Applicant is to place a check mark here if English language translation is attached.

The collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 120 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS.

SEND TO : Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.